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HOFFMAN WARNICK & D'ALESSANDRO, LLC
75 STATE STREET
14TH FLOOR
ALBANY, NY 12207

EXAMINER
SURVILLO, OLEG

ART UNIT	PAPER NUMBER
2142	

NOTIFICATION DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS,
WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed
  after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any
  earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>08 November 2007</u>.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is
   closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-12</u> is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-12</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>08 July 2003</u> is/are: a)☒ accepted or b)☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a)☒ All   b)☐ Some * c)☐ None of:

      1.☒ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage
         application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)   4)☐ Interview Summary (PTO-413)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)   Paper No(s)/Mail Date. _____ .
3) ☐ Information Disclosure Statement(s) (PTO/SB/08)   5)☐ Notice of Informal Patent Application
   Paper No(s)/Mail Date _____ .   6)☐ Other: _____ .

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1.   A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicants' submission filed on October 5, 2007 has been entered.

Response to Amendment

2.   Claims 1-12 remain pending in the application. Claim 1 is amended herein. There are no newly added or canceled claims.

Response to Arguments

3.   Regarding the rejection of claim 1 under 35 U.S.C. 103(a) as being unpatentable over Choquier in view of Agarwalla, Applicants' arguments have been fully considered but they are not persuasive. In particular, Applicants argued that: **"in Agarwalla, the "content distribution flag" does not comprise a "service availability request" comprising a request for an availability of the determined content server. Rather, the purpose of "content distribution flag" in Agarwalla is to notify the receiving content server that a content caching system is "content distribution aware". .....
Clearly, the claimed "service availability request" does not correspond in any way**

with Agarwalla's "content distribution flag"." This argument is not persuasive

because Applicants failed to particularly point out a structural difference between the

claimed invention and the prior art in order to patentably distinguish the claimed

invention from the prior art. In particular case, the prior art structure is capable of

performing the claimed functionality ("the service availability request" of Agarwalla is

capable of comprising a request for an availability of the determined content server)

because both Agarwalla and the present invention have the same structure of

augmenting the service request by appending an additional information to HTTP header

prior to sending this modified request to a content server.

Applicants further argued that: **"Agarwalla's "content distribution**

information" does not correspond to the claimed service availability token,

containing at least a percentage of availability of the determined content server."

This argument is not persuasive for the same reasons as above.

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Choquier et al. (US Patent No.: 5,774,668) in view of Agarwalla et al. (US Patent No.:

6,985,936 B2) and in further view of Coughlin (US 2004/0024861 A1).

As to claim 1, Choquier shows a method for ensuring the availability of a service

proposed by a service provider in a data transmission system [load balancing] (abstract)

including at least one user workstation connected to the Internet network [client

microcomputers (102)] (Fig. 1), a plurality of content servers able to furnish services

provided by service providers [application servers (120)] in response to service requests

from said user workstation (col. 2 lines 43-47), and a proxy server interconnected

between said Internet network and said content servers [a Gateway microcomputer

(126)] for receiving said service requests from said user workstation and transmitting

each one to a content server able to provide the requested service (col. 2 lines 43-52);

said method including the following steps when said proxy server receives a

service request,

looking in a context table [a service map (136)] in the proxy server to determine

the content server able to provide the requested service (col. 8, lines 7-9). It is inherent

for the service request to be defined by URL since the communication between client

and content server via proxy is established using TCP/IP protocol and HTTP being a

request/response protocol between client and content server (col. 5, lines 5-9),

sending said service request from proxy server to said determined content server

(col. 8, lines 21-24),

sending said reply from said determined content server to said proxy server (col.

8, lines 25-27),

updating said context table in said proxy server by using information contained in said service availability token [local map (140)] (col. 10, lines 45-54 and 66-67; col. 11, lines 1-12), and

sending said reply messages from said determined content server to said user workstation via proxy server (col. 8, lines 25-27).

Choquier does not show that service availability request is appended to service request from client because proxy server is configured to automatically request service availability in predetermined time intervals (col. 10, lines 49-54). Choquier also does not show that service availability token is appended to reply from content server because service map dispatcher (144) is configured to automatically request service availability tokens from content servers (col. 10, lines 42-45), as well as removing service availability token since it was not appended before.

Agarwalla shows:

that the service availability request [a content distribution flag] (col. 8 lines 23-30) is appended to service request from the user workstation [augmenting HTTP GET request message with an HTTP header containing the "service availability request" (col. 8 lines 43-47)];

appending a service availability token [content distribution information] (col. 10 lines 13-15) to the reply provided by said determined content server before sending said reply from said determined content server to said proxy server [caching system] (col. 9 lines 64-67 and col. 10 lines 1-4); and

removing said service availability token from said reply upon reception thereof by said proxy server (col. 12 lines 38-48).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Choquier by appending a service availability request to said service request, append a service availability token to the reply, and remove said service availability token from the reply upon reception as taught by Agarwalla instead of periodically requesting service availability tokens from content servers (as taught by Choquier) in order to efficiently respond to service availability updates from the content servers that are currently serving service requests and therefore are susceptible to frequent changes in availability.

Choquier in view of Agarwalla does not explicitly show the service availability request comprising a request for an availability of the determined content server and the service availability token containing at least a percentage of availability of the determined content server.

Coughlin shows:

a request for an availability of the determined content server [a request to a server, in response to which the server responds with a message containing server metrics (characteristics)] (par. [0031]-[0032]), and

the service availability token containing at least a percentage of availability of the determined content server [reply message from the server containing server characteristics] (par. [0032], [0035], [0040]).

It would have been obvious to one of ordinary skill in the art at the time of the

invention to modify the method of Choquier in view of Agarwalla by having the service

availability request of Agarwalla comprise a request for an availability of the determined

content server and the service availability token of Agarwalla containing at least a

percentage of availability of the determined content server, as taught by Coughlin, in

order to include operating characteristics of the server in one or more headers of the

message (par. [0031] in Coughlin).

As to claim 2, Choquier shows that context table includes a plurality of entries

(400) corresponding to several URLs comprising service names and associated with the

same server name, where URLs refer to MAIL and BBS services that reside on the

same server (120e) (col. 9, lines 27-30).

As to claim 3, Choquier shows that context table contains "availability" as a

parameter for each entry associated with URL (col. 10, lines 66-67; col. 11, lines 1-7).

As to claim 4, Choquier shows that service request is rejected if the parameter

comprising "minimum throughput requirement" in context table [service priority table

(1220)] is defined as not available.

Choquier does not show that service request is rejected if the parameter

"availability" is defined as not available.

Examiner takes Official notice that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Choquier to define the parameter "availability" as not available in order to specify that the parameter "availability" of zero indicates that the content server is heavily loaded and as a result, not available (col. 11, lines 6-7).

As to claim 5, Choquier shows that context table includes multiple entries for the same server as recited in claim 2 where the entry with the parameter "availability" comprising CPU LOAD being the highest one selected when looking for an entry, at the top of the context table comprising service availability token (Fig. 4, (140)).

As to claim 6, Choquier shows that context table contains a plurality of parameters (Fig. 4, CPU LOAD, CPU INDEX) associated with the service availability token received from content servers, these parameters being updated in the context server upon reception of service availability token (col. 10, lines 49-54). It is inherent that the parameters contained in the context table and associated with the service availability request are the same as the parameters in the service availability token since the service availability token returns the parameters requested.

As to claim 7, Choquier shows refreshing the entry of context table by taking into account variables comprising CPU LOAD and CPU INDEX values included in the context table, which are a function of parameter "availability" comprising FREE CPU and AVAILABLE CPU (col. 14, lines 60-67; col. 15, lines 1-3).

As to claim 8, Choquier shows that the context table contains "availability" as a

parameter and serves to inform of change in state of any content server in the system

(col. 11, lines 46-47).

Choquier does not show that parameter "availability" is set to "not available"

when number of retries is equal to a predetermined maximum number.

Examiner takes Official notice that it would have been obvious to one of ordinary

skill in the art at the time of the invention to modify the method of Choquier to set the

parameter "availability" as "not available" when number of retries is equal to a

predetermined maximum number in order to specify that the parameter "availability" of

zero indicates that the content server is heavily loaded and as a result, not available

(col. 11, lines 6-7).

As to claim 9, Choquier in view of Agarwalla shows that service request

comprising content request (500) Fig. 5 in Agarwalla is written in HTML (Fig. 7A in

Agarwalla) and said service availability request is contained is contained in a header of

HTTP service request (Fig. 7A (714) in Agarwalla).

As to claim 10, Choquier in view of Agarwalla shows that said service availability

token is in XML format (Fig. 9F, col. 11 lines 22-36 in Agarwalla).

As to claim 11, Choquier shows updating context table when receiving service availability token from a content server (col. 10, lines 45-54) and changing parameter "availability" by overwriting its old value with the updated value, based on the last received token (col. 10, lines 54-57; col. 11, lines 10-12).

As to claim 12, Choquier shows means for implementing the steps of claim 1 such as user workstations [client microcomputers (102)], content servers [application servers (120)], a proxy server [a Gateway microcomputer (126)], context table [a service map (136)], and service availability token [local map (140)].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to OLEG SURVILLO whose telephone number is (571)272-9691. The examiner can normally be reached on M-Th 8:30am - 6:00pm; F 8:30am - 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Caldwell can be reached on 571-272-3868. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Examiner: Oleg Survillo

Phone: 571-272-9691

ANDREW CALDWELL
SUPERVISORY PATENT EXAMINER